



A.W. APOLLO

ness in design is afforded by the method chosen to provide pressure sealing at the doors. Briefly, this makes use of a soft rubber membrane, loosely spanning the rebate around the periphery of the door itself. When the door is closed, the inside edge of the complementing rebate in the door frame is pressed against the rubber membrane and, as the volume enclosed by the membrane is vented to the interior of the aircraft (and is thus at cabin pressure), with gain in height the pressure differential across the membrane causes it to mold itself against the frame and so form a seal.

Tail cone and fin form an integral unit, the frames at the fin-post stations being robust I-section fabrications for the front and intermediate units, whilst the main fin-post at the rear grows straight from a tadpole-shaped built-up box frame extending up to the rear pick-up points of the tailplane anchorage. The front points of tailplane mounting are formed at the tip of the "intermediate" fin-post which, with the chordal ribs spanning the raking front post and vertical rear post, forms a rigid torsion box to take the tailplane loads. The front fin-post, which rakes at 45 deg., stops at tailplane level and is joined to the front frame continuum with forged end-fittings. Pressed sheet chordal ribs and vertical stringers of top-hat section form the skeleton structure on which the fin is skinned, whilst built-up box ribs extend rearward of the main fin-post to carry the rudder shroud and hinge brackets.

The tailplane is built with a straight-through main spar of plate web type, using extruded angle booms only over the central quarter of its span: from there outboard the edges of the plate web are turned over to form flanges. The front spar is swept back at 10 deg. and is of similar construction. Inter-spar chordal ribs are pressed-sheet units notched for the top-hat stringers stabilizing the skin, but in way of the elevator hinges, on the tailplane centre-line, and in way of the fuselage/fin pick-up points, the ribs are additionally Warren-braced with rolled square-section tubes. Aft of the rear spar, the skin is

IN addition to showing the skeletal construction of the Apollo, together with the accommodation layout for 24 passengers, our chief artist Max Millar, has also skilfully portrayed the graceful proportions of this extremely attractive new aircraft. The disposition of the jet tail pipes and the plane of rotation of the airscrews relative to the cabin, should, with the wall insulation employed, go to make the Apollo a very quiet aircraft.